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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,777	02/20/2002	Shigeki Matsuda	111995	3646

25944 7590 05/09/2005

OLIFF & BERRIDGE, PLC  
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EXAMINER
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WONG, EDNA

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/077,777	MATSUDA ET AL.	
	Examiner	Art Unit	
	Edna Wong	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.  
 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-15 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>April 18, 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 18, 2005 has been entered.

This is in response to the Amendment dated February 18, 2005. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Response to Arguments***

**Claim Rejections - 35 USC § 103**

Claims **1-15** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Matsuda** (US Patent No. 5,645,706).

The rejection of claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Matsuda is as applied in the Office Actions dated January 15, 2004 and August 24, 2004 and incorporated herein. The rejection has been maintained for the following reasons:

Applicants state that the subject matter of this application has as an object of the

invention to avoid sludge in the treatment bath.

In response, the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest achieving the same advantage or result discovered by the Applicants. See MPEP § 2144.

Applicants state that in response to the changing oxidation-reduction potential (ORP), in the claims, the ORP is advantageously used for monitoring the treatment of the bath. In contrast, use of the electric conductivity or the hydrogen ion concentration (pH) as disclosed in Matsuda are inadequate for monitoring the treatment bath of the rejected claims.

In response, the claim 1 as presently written does not recite using the ORP for monitoring the treatment of the bath. It is well settled that unpatented claims are given the broadest, most reasonable interpretation and that limitations are not read into the claims without a proper claim basis therefor. *In re Prater* 415 F. 2d 1393, 162 USPQ 541 (CCPA 1969); *In re Zeltz* 893 F. 2d 319, 13 USPQ 1320.

Nevertheless, Matsuda teaches that in accordance with his invention, the hydrogen ion concentration (pH), the oxidation-reduction potential (ORP), the electric conductivity (EC) and the temperature, etc., of the chemical treatment bath are preferably measured, and the chemical solution added in response to changes therein, to constantly maintain each of the component ions in the chemical treatment bath within

prescribed concentration ranges (col. 9, lines 32-45). The management of the chemical treatment bath basically involves the control of the oxidation-reduction potential (col. 14, lines 17-18).

These disclosures would have suggested that the ORP was used for monitoring the treatment of the bath since the ORP was measured and controlled.

Furthermore, the claims are opened to include method steps of measuring and/or monitoring pH and EC.

Applicants state that regarding claim 3, Matsuda fails to disclose or suggest the additional features recited in the claim as amended.

In response, claim 3 now recites "maintain the amount of Fe ions within a solubility limit of  $\text{Fe}^{3+}$  ions". A person having ordinary skill in the art would have maintained the amount of Fe ions within a solubility limit of  $\text{Fe}^{3+}$  ions because  $\text{Fe}^{3+}$  is stably present in the bath with an ORP of 560 mV or greater as disclosed by Matsuda (col. 13, lines 55-58).

Furthermore, Matsuda teaches using iron as the electrode material (col. 30, lines 11-14). The secondary electrolysis mainly controls the dissolution and depletion of the iron ion (col. 30, lines 14-17).

Applicants state that regarding claim 9, Matsuda fails to disclose or suggest each and every feature recited in the claim as amended.

Art Unit: 1753

In response, claim 9 now recites that  $\text{N}_2\text{O}_4$  gas is generated and separating the  $\text{N}_2\text{O}_4$  gas from the treatment bath. Matsuda discloses a method at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in claim 1 to distinguish claim 1 from the prior art (i.e., similar processes can reasonably be expected to yield products which inherently have the same properties). Therefore, it would have been within the skill of the art to expect that  $\text{N}_2\text{O}_4$  gas is generated in the treatment bath from the duration of the method disclosed by Matsuda. Removing a gas from an electrochemical cell as conventionally done in the electrolysis art.

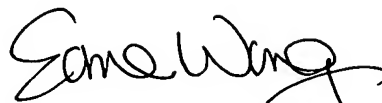
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1753

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Edna Wong", with a stylized, looping flourish at the end.

Edna Wong  
Primary Examiner  
Art Unit 1753

EW  
May 4, 2005